

AMENDMENT TO THE CLAIMS

Claim 1. (Currently Amended) A process for the catalytic hydrodehalogenation of SiCl_4 to form HSiCl_3 , which comprises

bringing a gaseous feed mixture comprising hydrogen and silicon tetrachloride into direct contact with at least one heating element of a resistance heating device, with the heating element being composed of a metal or metal alloy selected from the group consisting of tungsten, niobium, tantalum, an alloy comprising tungsten, an alloy comprising niobium, and an alloy comprising tantalum; or a metal alloy and being heated

heating to carry out the reaction; and

performing one of the following:

(a) fractionating or at least partially condensing the product mixture produced by said reaction, or

(b) passing the product stream from said reaction as starting material to a direct further use.

Claim 2. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~ wherein said at least one heating element is composed of a metal from the group consisting of niobium, tantalum and tungsten or of a metal alloy comprising niobium, tantalum and/or tungsten is used.

Claim 3. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~ wherein at least one heating element which has the form of a wire, a spiral, a web, a tube, a plate, a mesh or a honeycomb body is used.

Claim 4. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~
wherein a heating element whose wire diameter, wall thickness or plate or layer thickness is
from 0.1 mm to 10 mm is used.

Claim 5. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~
wherein the heating elements of the resistance heating device are operated at a temperature in
the range from 300 to 1250°C.

Claim 6. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~
wherein the reaction is carried out at a temperature in the range from 600 to 950°C and a
pressure of from 0.1 to 100 bar abs.

Claim 7. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~
wherein the reaction is carried out at a space velocity of from 2000 to 750 000 h⁻¹ and the gas
mixture of hydrogen and silicon tetrachloride is passed over the heating elements of the
resistance heating device at a linear velocity of from 0.01 to 10 m/s.

Claim 8. (Currently Amended) The process as claimed in claim 7, ~~characterized in that~~
wherein an SiCl₄/H₂ mixture having a molar ratio of from 1:0.9 to 1:20 is used.

Claim 9. (Currently Amended) The process as claimed in claim 7, ~~characterized in that~~ wherein the degree of conversion is set by setting the electric power of the resistance heating device.

Claim 10. (Currently Amended) The process as claimed in claim 1, ~~characterized in that~~ wherein the reaction is carried out in a flow reactor whose walls or wall insides are composed of niobium, tungsten, tantalum, a niobium , tungsten and/or tantalum-containing alloy, a heat-resistant glass, fused silica, a heat-resistant glaze or a heat-resistant ceramic.

Claim 11. (Currently Amended) The process as claimed in claim 7, ~~characterized in that~~ wherein the product mixture is passed through at least one heat exchanger located at the beginning of the process in order to vaporize SiCl_4 and/or preheat the H_2/SiCl_4 -containing feed mixture.

Claim 12. (Currently Amended) The process as claimed in claim 11, ~~characterized in that~~ (i) wherein the product mixture is at least partially condensed, liquid HSiCl_3 is isolated and any hydrogen and silicon tetrachloride obtained are recirculated to the feed stream to the process or (ii) ~~the product stream is passed as starting material to a further use.~~

Claim 13. (New) The process as claimed in claim 1, wherein said heating element is composed of niobium.

Claim 14. (New) The process as claimed in claim 1, wherein said heating element is composed of tantalum.

Claim 15. (New) The process as claimed in claim 1, wherein said heating element is composed of an alloy comprising tungsten.

Claim 16. (New) The process as claimed in claim 1, wherein said heating element is composed of an alloy comprising niobium.

Claim 17. (New) The process as claimed in claim 1, wherein said heating element is composed of an alloy comprising tantalum.

Claim 18. (New) The process as claimed in claim 1, wherein said method includes passing the product stream from said reaction as starting material to a direct further use and said further use is selected from the group consisting of esterification with an alcohol to form alkoxysilanes, hydrosilylation for converting olefins into organochlorosilanes, preparation of monosilane, preparation of solar silicon, and preparation of pyrogenic silica.